

Patent Claims:

1. A method for continuous measuring of dynamic fluid consumption, particularly of fuel, with the use of a continuously-operating flow sensor with variable pressure drop, whereby the pressure beyond the flow sensor is adjusted to a constant value by means of a pressure regulator, comprising guiding fluid into the pressure regulator upon exceeding a discretionary pressure level.

2. A method according to claim 1, comprising conducting a volume of fluid into the pressure regulator and whereby this volume corresponds to the volume causing an increase in pressure.

3. A method according to claim 1, comprising diverting an additional volume of fluid, created by pressure increase, after exceeding the maximum volume that can be moved into the pressure regulator.

4. A pressure regulator (9) having a housing (41, 42), which contains an element (40) biased by a changeable force whereby said element (40) is coupled to a valve arrangement (49, 50) that is also arranged in the housing (41, 42) for the fluid to build up pressure therein, wherein the pressure regulator (9) contains a catch volume for the fluid.

5. A pressure regulator according to claim 4, wherein the pressure regulator (9) is provided with a diaphragm (40) having a great deflection capability.

6. A pressure regulator according to claim 4, wherein the catch volume is biased by an elastic element.

7. A pressure regulator according to claim 6, wherein said elastic element is a compression spring.

8. A pressure regulator according to claim 4, whereby the catch volume is biased by compressed air with adjustable pressure.

9. A pressure regulator according to claim 4, wherein a safety valve (54) is provided downstream from the sealing element (49) of the pressure regulator (9).

10. A pressure regulator according to claim 9, wherein the safety valve (54) is biased in the closing direction with compressed air having the same pressure as the one in the catch volume.

11. A pressure regulator according to claim 10, wherein the compressed air connection to the safety valve (54) can be blocked by means of a sealing element (43, 44) connected to the diaphragm (40).

12. A device for continuous measuring of dynamic fluid consumption, particularly of fuel, comprising a tank (2), possibly a fuel conditioning system, and preferably a controllable pump (6), a continuously-operating flow sensor for the fluid, preferably a Coriolis sensor (7), and a initial-pressure regulator (9) for the admission pressure between the flow sensor (7) and the fluid consumer, wherein the pressure regulator (9) comprises a housing containing a catch volume for the fluid, a valve arrangement, and an element biased by a changeable force and coupled to said valve arrangement.